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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,051	05/01/2001	Michael G. Martinek	PA0528.ap.US	4583

7590 04/14/2003

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EXAMINER	
ASHBURN, STEVEN L	
ART UNIT	**PAPER NUMBER**
3714	6

DATE MAILED: 04/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/847,051	MARTINEK ET AL.	
	Examiner	Art Unit	
	Steven Ashburn	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 May 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4,5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hedrick et al., U.S. Patent 6,135,884 (Oct. 24, 2000) in view of Mardsen et al., *Development of a PC-Windows Based Universal Control System*, 5th Intl. Conf. on FACTORY 2000, 2-4 April, 1997, Conf. Pub. No. 435 (hereinafter "*Mardsen*") and WinSystems, <www.winsystems.com> downloaded from the Internet on Apr. 2, 2003 (hereinafter "*WinSystems*").

Hedrick discloses a computerized wagering game apparatus employing a pc-based controller and designed to allow easy retrofit. The reference teaches that it is be desirable to provide a gaming machine allowing the potential of secondary game events to be realized such that the machine can be easily modified with new games or features that can maintain or increase a player's interest or desire to play a particular game. *See col. 2:61-3:5.* In addition, it would be desirable to reduce the costliness and inconvenience of updating thematic displays on gaming machine glass. *See id.* Accordingly, *Hedrick* describes an improved apparatus and method for controlling the content of various necessary displays in a gaming machine for both primary and secondary game events, as well as other new applications. *See id.*

In regards to claims 1 and 18: *Hedrick* teaches the following features:

a) A computerized game controller (607) operable to control a computerized wagering game including a controller interface (605) and a generic controller (621) for processing game and operating system instructions. *See fig. 5-7.*

b) Game system devices. *See fig. 5.*

c) Means for translating game events between the game system devices and the controller wherein the controller interface operates as an interface for the universal controller.

However *Hedrick* does not describe a "universal controller" or a "game translator system" wherein the translator translates game events between the universal controller and the game translator. Regardless of the deficiencies, these features were known in the art at the time of the invention and would have been obvious to an artisan in view of the prior art.

First, the benefits of "universal controllers" are recognized throughout commercial, industrial, and military applications. An gaming artisan would posses the knowledge that using a universal controller would benefit a gaming system by providing an adaptable system that would reduce the time and cost required to retrofit legacy systems as well as the development of new systems. For example, *Mardsen* describes the development of a PC-based, universal control system for industrial control. In particular, the reference teaches that taking advantage of the controller's inherent adaptability which allows one controller to be used for many tasks with few changes to the hardware. *See p. 1.* **As a result, the use of a "universal controller" may be used as a retrofit of existing systems or as part of a completely new system.** *See p. 2.* Because of the variety of applications and hardware, the uses only need select the modules required for a specific application. *See id. Mardsen* suggests that a universal controller would benefit a wide range of commercial applications and is not merely limited to industrial control. *See p. 3.* Notably, with respect to software, *Mardsen* additionally describes the benefits of objected oriented languages and standard libraries of functions to provide software modularity and reusability such that "controls" can be added to any project with ease. *See p. 3.* Thus, *Mardsen*

demonstrates that it was generally known at the time of the invention to employ "universal", pc-based embedded controllers and thereby reduce the time and cost of to simplify the retrofitting and development of systems.

In view of *Marden*, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the controller described in *Hendrick*, wherein an generic, embedded, pc-based controller controls a gaming device, to employ an adaptable "universal controller" and thereby reduce the time and cost of retrofitting old systems or developing new ones. Furthermore, as suggested by *Hedrick* designing a gaming machine to be easily modified with new games or features enhances the device by allowing it to maintain or increase a player's interest or desire to play a particular game. *See col. 2:61-3:5.*

Second, "universal controllers", such as suggested by *Mardsen*, include means to translate system event between the universal controller and the translator system. For example, *WinSystems* describes commercial-off-the-shelf (COTS) universal controllers for use in industrial and original equipment manufacturer (OEM) applications using industry standard formats such as PC/104 and STD Bus. *See p. 1. WinSystems* builds single board computers with pc-based processors that support industry standard software such as Linux, Embedded Linux, Windows Embedded NT, Windows Embedded XP, Windows CE, and DOS plus other PC-compatible Operating Systems / Real-time Operating Systems. *See id.* PC/104 system components are small, reliable, easy-to-use, cost-effective, scalable, and powerful computer system building blocks used for a variety of applications. *See id.* Similarly, the STD Bus is referred to as the "Blue Collar Bus" due to its use in industrial and process control applications. *See id.* Its continuing popularity is driven by the ability to support a large mix of translator and to easily change its configuration in the future. *See id.* Since the STD Bus supports the PC-based architecture, it is possible to leverage the vast software infrastructure supporting PCs into products that can survive in harsh environments. *See id.* STD Bus is an evolutionary, not a revolutionary bus. As such, it has migrated to

more and more powerful processors while still supporting existing I/O cards designed by vendors and customers alike. *See id.*

In particular regards to the claimed subject matter, *WinSystems* describes a translator system for translating system events between the universal controller and the translator system. *See Winsystems, pp. 9-12, 21-24.* These include translation modules for translating data of various formats including serial, network digital, analog, audio and video. *See id.* As a result, the universal controller is adaptable to exchange data with a wide variety of devices. Thus it was known in the art to employ a translator system to translate events between the universal controller and the translator system.

In view of *WinSystms*, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the gaming devices suggested by the combination of *Hedrick* with *Mardsen*, wherein a universal controller is embedded in a gaming device and an interface translates game events between the game system devices and the controller, to add the feature of a translator for translating game events between the universal controller and the game translator. As suggested by *Mardsen*, the modification would take advantage of the controller's inherent adaptability which allows one controller to be used for many tasks with few changes to the hardware. *See p. 1.*

Consequently, for the reasons given above, the claims are unpatentable because they would have been obvious to an artisan at the time of the invention in view of the prior art when taken as a whole.

In regards to claim 2, it is implicit in *Hendrick* that the controller interface includes data bus drivers to control and configure the hardware to communicate data on the data bus between the controller (623) and other devices (651). *See fig. 6.*

In regards to claim 3, it is implicit in *Hedrick* that the controller interface includes an address decoder to decode addresses transmitted in the data buses to store and recall data from particular memory locations. *See fig. 6(605)(647).*

In regards to claim 5, *Hedrick* additionally teaches the controller interface having read only memory (ROM) for storing game system programs. *See fig. 6(643).*

In regards to claims 6 and 7, *WinSystems* implicitly teaches a controller interface having an identification module unique to the system wherein the identification module is a silicon serial number. In particular, *WinSystems* provides pc-based processor manufactured by Intel Corp. All Pentium-III® and later processor are manufactured with an identification module containing a silicon serial number to enhance security.

In regards to claim 8, *Hedrick* additionally teaches a game operating system controller including ROM for storing gaming operating system programs. *See fig. 6; col. 2:40-60, 10:41-56.*

In regards to claim 9, *Hedrick* additionally teaches flash memory for storing gaming program unique to the gaming system. *See fig. 6(607,609); col. 2:40-60, 10:41-56.*

In regards to claim 10, *Hedrick* additionally teaches the universal controller have flash memory for storing gaming program unique to the gaming system. *See fig. 6(635,639); col. 2:40-60, 10:41-56.*

In regards to claim 11, *Hedrick* additionally teaches the flash memory being a removable memory card. *See id.*

In regards to claim 12, *Hedrick* additionally teaches a logic communications bus for handling logic-level signals between the interface controller and the game translator interface. *See col. 10:34-40.* Alternatively, *WinSystems* also teaches this feature. *See p. 1.* More specifically, PC-104 defines the industry-standard data bus for handling logic level signals between an interface controller on a single-board computer and a translator interface modules.

In regards to claim 13, *WinSystems* additionally teaches a translator operating to translate events between logic-level signals and event signals. *See p. 9-11.* Labeling the events as "game events" is irrelevant because a computer cannot distinguish a "game event" event from any other type of event.

In regards to claim 14, *WinSystems* additionally teaches a driver/receiver module for translating between the logic-level signal and event signal type. *See id.*

In regards to claim 15, *WinSystems* additionally teaches a driver/receiver module being a voltage converter. *See p. 11.*

In regards to claim 16, *Hedrick* additionally teaches a video gaming system. *See fig. 13a; col. 1:49-52.*

In regards to claim 17, *Hedrick* additionally teaches mechanical reel-based slot machine. *See col. 3:66-4:1.* It is implicit that the mechanical reels will include a location sensor to detect the location of the reels and exchange signals containing location data with the game controller through the interface (506) between the reels (220) and the controller (502) wherein the location data is translated into digital data for

execution by the CPU. However, *Hedrick* does not describe receiving the event signal through the translator. Hence, in the system suggested by the combination of *Hedrick* with *Mardsen* and *WinSystems*, wherein the device provides for easy retrofitting by receiving event data from game components is communicated though a translator interface, it would be obvious to an artisan to transmit reel location data through the translator in order to simplify retrofitting of the device and thereby save time and money while maintaining player interest.

Claim 19, 20 and 34: The combination of *Hedrick* with *Mardsen* and *WinSystems* is described above. *See supra.* In regards to claimed method reconfiguring a computerized wagering game, *Hedrick* describes a reconfigurable wagering game designed to be reduce the cost and effort required to provide new features to maintain or increase a players interest. *See col. 2:61-3:5. Mardsen* describes a universal embedded controller adaptable to a wide variety of applications including retrofitting existing systems to reduce to the cost and effort of development. *See pp. 1-2.* Furthermore, retrofitting with a universal controller overcomes the infliexible nature of a legacy controller and the redesign costs limiting to its original, special purpose. *See p. 1. WinSystems* describes a variety of controllers, data acquisition modules, signal conditioning modules and harnesses for interfacings a PC-based, embedded controller in commercial and industrial systems. As a whole, the prior art suggests retrofitting a gaming device with a universal, pc-based, embedded controller having data acquisition modules, signal conditioning modules and harnesses allowing flexible control over a variety of systems and requiring few changes to the system hardware to support new tasks. However it does not describe the particular steps of performing the retrofit. Regardless, these steps are within the ordinary skill of an artisan and would have been obvious at the time of the invention.

As stated above, *Mardsen* suggests retrofitting a universal controller as a replacement to an existing, special-purpose controller. *See p. 1.* The "retrofit" implicitly contains fundamental steps

including (i) removing the original special-purpose processor used to control the original system while leaving the legacy components including peripherals, sensors, motors, interfaces and harnesses; (ii) inserting the new, universal controller; (iii) interfacing the universal controller with the legacy components; and (iii) performing validation and verification of the retrofit to ensure the system works as designed including verifying of communication between the processor and the components through the interfaces and harnesses.

Consequently, in the method of configuring a gaming device suggested by the combination of *Hedrick* with *Mardsen* and *WinSystems* wherein a universal controller is retrofit into a gaming device, it would have been obvious to an artisan at the time of the invention to perform the steps of removing an original special-purpose computerized game controller used to control a computerized wagering game from the apparatus wherein the original computerized game controller was designed to and capable of working exclusively with a particular game apparatus; inserting a universal computerized game controller operable to control a video wagering game including a controller interface and a universal controller for processing game and operating system instructions and a game translator for translating game events between game system devices and the universal game control system, wherein the controller interface operates as an interface between the universal controller and the game translator. As suggested by *Mardsen*, the modification would take advantage of the controller's inherent adaptability which allows one controller to be used for many tasks with few changes to the hardware. *See p. 1.* Furthermore, as suggested by *Hedrick* designing a gaming machine to be easily modified with new games or features enhances the device by allowing it to maintain or increase a player's interest or desire to play a particular game. *See col. 2:61-3:5.*

In regards to claim 21, *Hedrick* additionally teaches operating the casino wagering system. *See col. 4:21-36.*

In regards to claim 22, *Hedrick* additionally teaches playing an existing game on the casino wagering system. *See id.*

In regards to claim 23, *Hedrick* additionally teaches operating the game using exisiting gaming system devices. *See col. 2:40-3:5, 4:21-36.*

Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Hedrick* in view of *WinSystems* and *Mardsen*, as applied to claims 1 and 18 above, in further view of Carlson, U.S. 5,707,286 (Jan. 13, 1998).

In regards to claim 4, the combination of *Hedrick* with *Mardsen* and *WinSystems* describes all the features of the instant claim except employing non-volatile random access memory (NVRAM). Regardless of the deficiency, this feature would have been obvious to an artisan in view of *Carlson.*

Carlson teaches using NVRAM in a gaming device in order to store information that is desirable saved even if power is removed. *See col. 8:16-46.* Thus, in view of *Carlson*, it would be obvious to an artisan at the time of the invention to modify the gaming system suggested by the combination of *Hedrick* with *Mardsen* and *WinSystems* to add the feature of employing NVRAM. As suggested by *Carlson*, the modification would allow the device to store information that is desirable saved even if power is removed and thereby avoid liability from loss of data during a power outage. *See id.*

Prior Art, Not Relied On

a. Paul Virgo, *Embedded PC's for the Industrial Marketplace: An Analysis of the STD Bus*, WESCON/'93. Conference Record, Sep 28-30, 1993, pp. 621 –623. The reference teaches that

embedded pc-based systems, including PC/104 are well known. Additionally teaches the need for communication and data acquisition interfaces.

b. Jahn Luke et al., *A commercial off-the-shelf based replacement strategy for aging avionics computers*, Aerospace and Electronics Conference, 1998. NAECON 1998, Proceedings of the IEEE 1998 National, 13-17 Jul 1998, pp. 177 –181: The reference teaches suggests upgrading special purpose, legacy controllers with a COTS that can be adapted to different purposes.

c. Jim Blazer, *PC/104 Intelligent Data Acquisition*, PC/104 Embedded Solutions (Spring 1998) describes using PC/104 modules for translation of data in an embedded control system.

d. D. Powell et al., *GUARDS: a generic upgradeable architecture for real-time dependable systems*, Parallel and Distributed Systems, IEEE Transactions on Parallel and Distributed Systems , Volume: 10, Issue: 6 , Jun 1999, pp. 580 –599: The reference teaches the development of COTS-based, generic, controllers.

e. Robert A. Burckle, *PC/104 Embedded Modules: The New Systems Components*, <http://www.winsystems.com/papers/sys_components.pdf> downloaded from the Internet on Mar. 20, 2003: describes the many benefits of using PC/104 systems as embedded controllers including speeding product to market and reducing engineering effort.

f. Robert A. Burckle, *STD Bus: Performance without Complexity*, <http://www.winsystems.com/papers/stdperformance.pdf> (Aug. 1, 2001) describes to history and benefits of using a STD Bus system as a universal controller.

g. Craig Matasumoto, *Intel starts preaching about security*, EE Times <http://eetimes.com/story/OEG19990121S0014> (Jan. 21, 1999) describes Intel Corp's. use of identification modules.

h. RTD USA, <www.rtdusa.com> (1998), downloaded from the Internet on Mar. 20, 2003 describes additional COTS universal controllers, interfaces and translation systems.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Ashburn whose telephone number is 703 305 3543. The examiner can normally be reached on Monday thru Friday, 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9302 for regular communications and 703 872 9303 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 1078.

S.A.
April 6, 2003

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